

Airports Commission Consultation

APPRAISAL FRAMEWORK

SUBMISSION BY THE RICHMOND HEATHROW CAMPAIGN

February 2014

This submission is the response from the Richmond Heathrow Campaign to the Airports Commission's *Consultation on Draft Appraisal Framework, January 2014*. We do not consider that the contents are confidential and we have no objections to its publication.

Richmond Heathrow Campaign

The Richmond Heathrow Campaign (RHC) represents three amenity groups in the London Borough of Richmond upon Thames: The Richmond Society, The Friends of Richmond Green, and the Kew Society which together have over 2000 members.

The members of our amenity groups are adversely affected by noise from Heathrow Airport's flight paths, particularly at night. Noise levels around Heathrow are too high and while the trend is for quieter aircraft the reduction in noise levels in recent years has been slow and offset by more flights. We favour a ban on air traffic at night at Heathrow. We are opposed to the introduction of mixed mode and to the development of additional runways at Heathrow. We nevertheless recognise the importance of air transport and the need to make a positive and objective contribution to the Airport Commission's work.

In furtherance of these aims, RHC has submitted to the Airports Commission (the Commission) both short/medium term proposals and longer term proposals which encourage better use of existing airport capacity in the southeast and UK regions so as to provide for, inter alia, UK passenger growth without additional runways over the foreseeable future. Our longer term proposals recognise the potential capacity limits in the southeast and therefore strongly support a dispersed airport system between the five main southeast airports with improved surface access throughout the airports' catchment area.

OBJECTIVES - CHAPTER 3

RHC's objectives differ from those of the Commission in three fundamental ways which ultimately impact the Draft Appraisal Framework:

1. Noise Framework

Noise from Heathrow air traffic is the reason for RHC's existence and our response here is based on the premise that existing noise levels are too high and are reducing too slowly and this situation can only be exacerbated by new runways at Heathrow. We seek a pro-active response to the existing noise situation and not merely a reactive response to expansion. Accordingly, we would prefer the Commission's objectives to focus on the long term reduction in noise with provision within that framework for capacity and its use to meet the economic needs of the UK. However, the Commission's objectives, as set by the Government, provide for growth to satisfy the UK's economic needs but balanced with a trade-off with negative environmental impacts. In theory the outcomes of the two approaches should be the similar but in practice we believe there is substantial risk that growth will be at the expense of the environment.

It is helpful to examine the different RHC and Commission approaches in the context of the Government's noise objectives, to which we gave qualified support, in the National Policy Framework (NPF) approved in 2013. The qualifications are explained in our Noise response to the Commission in

2013. Our response here is focused on Heathrow.

- A. The Government's primary objective is to limit and where possible reduce the number of people significantly affected by aircraft noise;
- B. As a general principle, any benefits from future improvements in aircraft noise performance should be shared between the aviation industry and local communities; and
- C. The Government wants to strike a fair balance between the negative impacts of noise and the positive economic impacts of flights.

We think it helpful to start with the noise energy generated by aircraft and then consider its dispersion and impact on the local community.

In the future there will be an increase in noise energy generated due to two factors: firstly, Heathrow serviced around 72 million passengers a year (mppa) in 2013 against widely accepted capacity of at least 90 mppa within the legal limit of 480,000 flights a year. The noise energy generated in servicing 90 mppa, using larger aircraft and higher load factors, is likely to be higher than generated from 72 mppa but we do not have the details. Secondly, an additional runway is likely to increase the noise generated in servicing an approximate 50% increase in flights to those servicing 90mppa. We recommend that the Appraisal Framework provides this noise energy information.

Offsetting the increase in noise energy will be quieter aircraft. Noise is generated partly as engine noise and partly as airframe noise. The technical opportunities on both counts for reducing the generation of noise are decreasing at a diminishing rate. We recommend that the Appraisal Framework provides this information.

Importantly, Objective (B) of the NPF requires the benefit of quieter aircraft to be shared between the aviation industry and local communities. So for illustration only, a 30% reduction in aircraft noise generated over the next 40 years might be shared on a 50:50 basis with local communities. In this example 15% growth could be accommodated therefore but this would first need to offset the noise energy growth from servicing 90mppa compared to 72 mppa thus leaving less than 15% for additional flights from a third runway. In this example there is a substantial noise deficit compared to 50% growth from expansion.

At present there is no process available for the local community to negotiate the sharing of the benefit from improving aircraft noise performance and the tendency is for the aviation industry to seek 100% of the benefit and often more in support of growth. We recommend the Appraisal Framework provide for this sharing of the benefit of quieter aircraft and enable the interested parties to be consulted on the sharing.

The net result of noise energy growth and the shared offset of quieter aircraft may still be insufficient reduction in noise impact to satisfy the diminishing noise limits set by the World Health Organisation standards, which should be treated as absolute limits rather than negotiable trade-offs. We comment later on the detail of these standards in reference to the Noise Module. The NPF Objective (A) only provides a long-stop in limiting an increase in noise. But it too encourages a reduction where possible. These tests are concerned with the impact on people rather than the noise energy generated. We recommend the Appraisal Framework should be based on a reduction in noise that satisfies both the NPF Objectives and the WHO standards, whichever is the lower.

For any level of noise energy generated the noise impact can be varied by dispersing the noise over the local population. But here we run into difficulty because of the lack of agreement on measurement of noise impact and the issue of fairness in distributing noise over people. We discuss this subject later in reference to the Noise module.

The Sustainable Aviation Noise Road-Map 2013 (www.sustainableaviation.co.uk) provides an analysis of

the issues raised above but is not airport specific, assumes no additional runways, does not include the sharing of benefit as required by NPF Objective (B) above and does not satisfy the WHO standards. But based on information contained in the report and elsewhere we believe it unlikely that dispersal of the noise energy will adequately compensate for the additional energy created by full use of an additional runway at Heathrow and that it will be very challenging indeed for Heathrow to satisfy the terms of the NPF and the WHO standards with an additional runway.

We do not believe the Draft Appraisal Framework, as currently structured, is designed to assess the noise issue by applying the NPF in the manner outlined above and we question the extent to which the imperative need to reduce noise from existing levels and to WHO standards and timetable will be recognised.

Analytically, we believe it would be incorrect to take advantage of the benefit of quieter aircraft in the expansion options without including a similar benefit in the base case. We understand this will be done but it is unclear how the benefit of technological improvements will be shared. We believe that the Sustainability base case and “do-minimum” business case should have timely noise reduction built in and at least to the levels and timetable proposed by the WHO and within the Objectives established by the NPF.

2. “Do-Minimum Option”

We suggest the meaning of the term “do-minimum” is not sufficiently clear in the Draft Appraisal Framework. It would appear to include some dynamics and not just represent a frozen position at say 2011 but to what extent it is driven by markets and/or intervention is not entirely clear. While the Commission has decided there is a need for an additional runway in the southeast by 2030 and that therefore the “do-minimum” is not an option to be recommended, we believe it is essential that the “do-minimum” case be prepared as though it were an option so as to be fairly compared in every respect with the runway options.

The Commission has chosen to divide the decision to proceed with an additional runway into two stages or recommendations with the first recommendation being that an additional runway is needed as published in the Interim Report, December 2013. The second stage and now the subject of the Draft Appraisal Framework is the choice of a particular project and its location. However, the actual commercial decision to invest in new infrastructure by sponsors and the political decisions by Government to enable the commercial decision and to subsidise some of the investment will almost certainly combine both stages into a single decision.

We believe therefore that the Commission’s final recommendation in the summer 2015 should include the option for Government and commercial sponsors “to proceed” or “not to proceed” with an additional runway with the choice of project being part of the decision to proceed. The “do-minimum” case should be a prominent part of the decision. The two stage approach adopted by the Commission tends to impart a degree of inevitability in the decision to proceed by the time the choice of project is reached but it is only a recommendation and not a decision already made.

The relevance to the Appraisal Framework is the importance given to the “do-minimum” case. It is not mentioned in the first three chapters of the Draft Appraisal Framework as far as we can see. It seems that neither Heathrow nor Gatwick are being asked through Chapter 4 or elsewhere what would the airports do in the situation where they do not add a runway either because the other airport is the successful candidate or because no new runways are justified in the foreseeable future politically, environmentally or commercially. Chapter 4 of the Commission’s Interim Report dealt with the “do-minimum” case in some respects but many of the key issues were either treated as outside the remit of the Commission (e.g. tax), delegated to another body such as the Climate Change Committee or held over for further research in stage 2. For example, noise, pollution, financing, state subsidies and the many other issues raised by the

Modules in the Appendix A of the Draft Appraisal Framework are issues that for the most part have been held over for stage two; it is unclear how the recommendation to proceed with a new runway can be reliably based on an incomplete assessment process in stage one. We believe stage two will need to complete the gaps and therefore re-appraise the “do-minimum” case contained in the Interim Report.

We believe the “do-minimum” option is being placed back-stage by the Draft Appraisal Framework, perhaps because the recommendation to proceed with expansion is now regarded as closed. But as we say above, the Government and commercial sponsors will surely want to have the “do-minimum” as an option as part of a single decision on whether or not to proceed with expansion.

3. Project Timing

The Commission has established a first flight date no later than 2030 but this objective creates a demand risk and it is not clear for what benefit and how the risk will be absorbed and by whom. We regard the question of unmet need as also a question of timing. Should demand growth be weaker than forecast or the climate change ceiling limit growth then in order to maintain the project rate of return the first flight would need to be delayed, aeronautical charges and in turn ticket prices would have to be raised rise or subsidies increased. We believe the Commission’s recommendation on timing should be more flexible and in any event the Appraisal Framework should facilitate a recommendation that deals with this timing uncertainty. The evidence and proposals we submitted to the Commission in 2013 suggest no new runways are needed until at least 2050.

Reference to specific paragraphs on Objectives in the Appraisal Framework

Paras 2.5 and 3.3: We note that the Commission suggests trade-offs between objectives may be needed. As pointed out above, some environmental constraints have absolute limits not susceptible to trade-off.

Para 2.8: We note the Commission will be building a business case as well as providing its appraisal. Combining these two roles can lead to biased and unsatisfactory decisions.

Table 3.1. Objectives:

- a. We broadly agree the list of objectives.
- b. We are not entirely clear as to the distinction between commercial and financial viability used by the Framework. It is not altogether clear where financial viability features in the list, although we appreciate this issue is dealt with at some point.
- c. Economy: “To promote employment and economic growth...”. We regard this as a by-product and not as a primary objective or an end in itself.
- d. Environment: “To minimise noise impacts”. As discussed we seek a reduction in noise.
- e. Environment: “To protect local air quality”. This should go further and in the case of Heathrow seek to bring the exceedances within the law.
- f. Cost: “To make efficient use of public funds, where they are required, ...” As discussed above we believe substantial use of public funds, particularly within the airport perimeter, will possibly challenge EU rules, be an unjustified drain on Treasury funds in largely supporting leisure travel for the better off and provide uncompetitive advantage to a single airport.
- g. Cost: “To have the equivalent overall capacity of one new runway operational by 2030”. We commented above on the risk created by this objective.

UPDATED SCHEME DESIGN - CHAPTER 4

Para 4.10: “The Commission does not intend ... to investigate any airport proposals other than the three schemes short-listed in its Interim Report” The two Heathrow proposals included outline plans for a fourth runway at Heathrow. It is not clear that any decision on an additional runway in the southeast can be made independently from consideration of a second additional runway and how the Draft Appraisal Framework intends to handle this issue.

It is not clear from the Draft Appraisal Framework how a recommendation and then a Government decision on whether or not to support capacity and where it might be located can impact the relatively independent commercial decisions made by airport and airline operators in the private sector.

It is not clear to what extent will airport sponsors be held to their proposals over a 60 year timescale or to proposals modified by the Commission in making its recommendations and to what extent can the airlines be co-opted into any commitments.

It is not clear how different demand and other forecasts from each proposer and the Commission itself will be reconciled. For example, we note the short-listed proposals for Heathrow and Gatwick use different demand forecasts and aircraft load factors compared to the DfT and Commission forecasts.

We suggest it will be impossible to decouple the development and operation of an additional runway from the environmental impact. But the environment and hence local community (in terms of noise and pollution) and UK as a whole (in terms of climate change) should bear none of the project risk. It is not clear how this can be achieved.

APPENDIX A: APPRAISAL MODULES

1 Strategic Fit

Para 1.1: “The Commission has already undertaken a significant work programme to inform its Interim Report on the type of capacity and connectivity which the UK and the Southeast airport system will likely need.” While seemingly an impressive amount of work has been done with regard to demand, the Draft Appraisal Framework seems to contradict this statement elsewhere in saying more work needs to be done on segmentation of demand, on international transfers and the hub versus dispersed airport system and in other areas. We understand the Commission’s modelling to have been at a high level rather than the granular.

Para 1.4: Reference is made to the “do-minimum “ scenario detailed in the introduction to the Draft Appraisal Framework. We have not been able to find any mention of “do-minimum” in the Introduction.

2. Economy Impacts

Para 2.1: We suggest connectivity is not especially important to the leisure demand which is by far the largest segment of demand.

Para 2.10: reference to “do-minimum” in the Introduction - see Strategic Fit Para 1.4 comment above.

Para 2.26: “Once an airport reaches maximum capacity its ability to absorb tactical delays into its schedules is reduced significantly.” We accept the principle but disagree with the widely held assumption that Heathrow is at maximum capacity.

As we pointed out in our short term proposal to the Commission last year, the 480,000 flights per year is a legal limit and not a physical capacity limit. It is widely accepted Heathrow has capacity to increase current passenger throughput of around 72 mppa to over 90 mppa. Furthermore, on an hourly basis Heathrow does not operate at full physical capacity for most of the day. In our short term proposal we

made the case for a more evenly smoothed slot schedule during the day which would not only provide increased resilience but provide capacity for a shift to the day of all night flights between 11pm and 7am. The Commission's Interim Report has gone a stage further and recommended a number of short term measures which from our preliminary assessment we suggest could increase the hourly capacity during the day by 10% to 15%. We have not yet taken a view on the environmental impact of these measures.

3. Local economy impacts

If Heathrow were not to add another runway there is still the potential for passenger growth from the current 72mppa to over 90mppa and, as we have argued in our longer term proposal to the Commission, the potential replacement of approximately 30 mppa international transfers with local demand. The developments would provide the opportunity for additional local employment, greater productivity and efficiency.

Local housing is under great pressure and constraining development so that an additional runway can be built to service for the most part international transfers and leisure passengers requires justification.

4. Surface Access.

We broadly support the Commission's approach to Surface Transport but would give it more weight in supporting a diversified airport system with the aim of everyone in the catchment area trending towards being indifferent as to which of the five London airports they access. If there is a choice we would rather money were spent on surface access than additional runways so as to maintain and further justify London's five airports as the best international hub in the world.

5 Noise

We provided several observations and proposals with regard to noise in our response to the Commission in 2013 and we have commented above on noise objectives.

We consider that the Appraisal Framework for noise should be based on the Environmental Noise Directive 2002/49/EC, which specifies certain minimum requirements for (inter alia) major airports and recognises that supplementary noise indicators may also be employed. Thus:

- The directive states that noise maps and supporting data for the average noise metric must be given from 55 Lden and 50 Lnight, but neither value is represented as the threshold at which noise from air traffic becomes intrusive. We therefore recommend that the noise maps, etc should start at 50 Lden and 45 Lnight, in accordance with the noise exposure limit values set out in the World Health Organisation (WHO) Guidelines on Community Noise.
- The noise from air traffic is characterised by a succession of distinct noise events from successive movements, the impact of which is not captured by averaging the overall noise energy. We therefore recommend that the noise maps and supporting data should be supplemented by indicators of: (a) the number of movements in each hour of the day on each runway, and (b) which of those movements exceed the maximum noise event limit (60 Lmax) in the WHO guidelines.
- The foregoing data should be presented so that it is possible to identify the impacts on areas over which the flight paths on the existing runways are routed, and separately on areas over which the flight paths on the additional runway would be routed.
- Where periods of respite are proposed, it should be explained to what extent they would modify the noise maps and supporting data and the indicators for the number of movements.

We support the findings of the ANASE Report which hitherto has not received the recognition we believe it should have done including recognition by the Commission. It is important to consider the impact on people of the number of flights as is stressed by the ANASE Report.

The average energy, as measured by the 57 LAeq metric, is an inadequate sole metric for considering noise impact on people. It does not reflect all the properties of noise nor levels of unpleasantness and tolerance, and in any event is too high as a standard.

We attempted to examine the issue of respite in our Noise response in 2013. We highlighted the importance of respite, whether by alternation of runways or by varying spatially the arrival and departure tracks. A particular current weakness of respite in our view is that respite often means a reduction in noise but because of the sheer number of flights and the multiple sources of noise, the noise is often not reduced to background noise levels. Noise in respite periods is often due to the de-alternating aircraft which we believe should be substantially avoided. While runway de-alternation might currently be of the order of 5% of arrivals at Heathrow, it represents around 40% of half hour respite intervals being interrupted. This highlights the importance of the pattern of interruption and whether the interruption is concentrated over a short period of time or spread across the whole respite period. We are concerned that the Draft Appraisal Framework seemingly does not give respite sufficient attention.

We recommended consideration be given to a metric that measures noise in respite periods and another in the non-alternation period.

The Draft Appraisal Framework's reliance on a scorecard for many different metrics could lead to inconclusive recommendations.

In our submissions to the DfT and to the Commission we have sought a ban on all night flights between 11pm and 7am and we stand by this. In our short term proposals to the Commission we argued that there is sufficient daytime capacity at Heathrow to absorb all the current night flights. The short term recommendations of the Commission suggest to us that the day time capacity could be increased still further by 10% to 15%. We urge the Commission to consider a night flight ban in its Appraisal Framework.

We are wholly opposed to Commission's recommendation of Early Morning Smoothing and seek for this to be removed from the Draft Appraisal Framework. There is daytime capacity to deal with de-alternation in the 6am to 7am hour. Moreover, the build-up in the stacks is due to pilots rushing to the front of the queue because of the first come first serviced practice at Heathrow so that arrivals far exceed scheduled arrivals which happen to be one of the lowest hourly rates across the whole day.

We support the consideration of noise in relation to background noise levels, particularly in connection with quieter areas such as Kew Gardens and Richmond Park which are used by many visitors for respite. We support the concept of "Quiet Areas".

We support the inclusion of the more vulnerable, schools etc. in the noise assessment.

On the subject of fairness of noise distribution, we suggest that everyone has the same right to peace and quiet and that satisfaction of their needs for tranquillity should not be compromised. Indeed those experiencing the highest levels of noise impact should be given the greatest assistance in trying to reduce the impact. Broadly, we are not in favour of using noise dispersion to increase the noise impact on any person but rather to spread the benefits of noise reduction. In some cases the reduction may be the combination of an increase and a reduction.

6 Air Pollution

We recommend that the Appraisal Framework should include an objective to comply with EU limits on air quality. There are areas around Heathrow that are not compliant and exceedances could be made worse by an additional runway and road congestion that results. The Sustainability base case and "dominimum" business case should model the air pollution over the sixty years on the basis there is no additional runway but increased pollution resulting from passenger numbers rising to 90 mppa. Particulates should be included.

7 Biodiversity

No comment on the Framework

8 Carbon

At present the assumption applied to the DfT and Commission forecasts appears to be that UK aviation will be allowed to produce up to 37.5 mtpa carbon equivalent and more so long as credits are purchased to maintain a net of the same amount. This is said to provide headroom for an additional runway. In practice an additional runway at Heathrow would result in Heathrow producing the lion's share of the allowable aviation carbon leaving the other southeast airports and those in the region potentially severely restricted in the carbon they are allowed to produce and hence the number of flights. Moreover, the aviation gross 37.5mt of carbon would represent around 25% of the 160 mt legal limit for the whole UK by 2050. We are not aware of any plans as to how the rest of the UK economy can possibly survive the restriction or the marginal economics that would result in an efficient allocation of carbon in these circumstances. Additional aviation carbon secured through the ETS would only make matters worse. It is pertinent to this dilemma that most of the use from an additional runway will be by UK resident leisure passengers and moreover those that are better-off. The Draft Appraisal Framework does not appear to recognise the economic and social issues but should do so.

9 Water and Flood Risk

No comment on the Framework

10. Place

No comment on the Framework

11. Quality of Life

No comment on the Framework

12 Community

No comment on the Framework

13 Cost and Commercial Viability

We provide here an example where the Draft Appraisal Framework acknowledges the absence of assessment in stage one and which we believe materially distorts the outcome recorded in the Interim Report - that is demand segmentation.

In 2011, based on total demand in the southeast of 101 million passengers, excluding transfers, only 3.3 mppa (3%) were UK-resident business passengers, 3.0 mppa (3%) foreign business passengers and 7.0 mppa (7%) foreign leisure passengers visiting the UK. The DfT's forecasts expect these figures to double approximately by 2050.

In terms of existing long-haul passengers, which is the critical segment for economic contribution to the UK and its connectivity, these three segments of demand sum to just 13.3 mppa out of 101 mppa passengers in the southeast. Furthermore, the fourth long-haul segment, UK-resident leisure passengers, amounting to 14.1 mppa tends to produce a balance of payments deficit and comprise the better off in society for which connectivity is not a particularly important issue.

Seemingly, no attempt was made in stage one to explain how state subsidies of at least £6bn for an additional runway at Heathrow can justifiably support such a high proportion of leisure travel. Similarly what is the case for aviation seeking 25% of the UK carbon allowances in 2050 (plus assumed use of ETS credits) at possibly considerable disadvantage to the rest of the UK economy in order to support leisure travel for the better off? How can an additional runway be justified largely in support of leisure travel when set against the negative environmental impacts?

In our view, too much of the debate about expansion of Heathrow has focussed on the relatively small business segments and ignored the fact that most of the capacity from an additional runway will be used for short-haul and UK-resident long-haul leisure passengers totalling 80.5 mppa in 2011 or 80% of southeast demand and incurring an opportunity cost far less than that of the long-haul business segment. We do not deny the economic importance of business travel but in terms of justifying a new runway, the number of business passengers is relatively small and for the most part businesses can better afford to buy the capacity and connections they need when compared to the more price elastic leisure passenger. We should emphasise we are not against leisure travel per se. We would like to see the Appraisal Framework examining this issue.

Another example, where the Commission we believe has said more work will be done in stage two concerns international transfers, which affects not only size of demand but pros and cons of a hub airport versus dispersed airport system. One of our longer term proposals to the Commission in 2013 observed the exemption of APD on international transfers and provided evidence that international transfers did not for the most part increase the viability of thin routes but instead they increased frequency on the more popular routes. International transfers take up one third of Heathrow's capacity and in effect produce the equivalent of one third of the noise. We recommended that there should be a gradual replacement of international transfers with local demand. Half empty flights from Heathrow to New York every 20 minutes which is not inconceivable in 2050 judging from the trends is questionable use of scarce airport resources. We would like to see the Appraisal Framework examine the frequencies, passenger loads and proportion of transfers of each of Heathrow's destinations.

These examples illustrate fundamental issues along with many others that need to be addressed in stage two using a comprehensive "do-minimum" case with which to compare the expansion projects.

14 Operational Efficiency

No comment on the Framework

16 Delivery

No comment on the Framework

APPENDIX B: COMPONENTS OF UPDATED SCHEME DESIGN

No comment on the Framework

APPENDIX C. CONSULTATION QUESTIONS

1. Are the objectives stated in Table 3.1 suitable for assessing the short-listed options? If not please explain why not, and suggest any alterations you feel would make them more suitable.

2. Are there any other objectives that the Commission should consider, and if so what are they?

3. Will the appraisal modules described in Appendix A be sufficient to analyse the short-listed options against the stated objectives? If not please explain why not, and provide examples or evidence to support your answer.

4. Will the appraisal modules described in Appendix A be sufficient to construct business cases and sustainability assessments to enable the Commission to make recommendations and the Government to act on these? If not please explain why not, and provide examples or evidence to support your answer.

5. Are the five components of the updated scheme design set out in Appendix B suitable for understanding schemes' potential performance against the stated

objectives? If not, please suggest any modifications that you think would make them more suitable.

6. Is the level of detail in the components for the updated scheme design set out in Appendix B appropriate given the likelihood that some schemes may not progress to full stages of development? Please provide examples or evidence to support your answer.

We have sought to answer these questions under the individual headings of the Draft Appraisal Framework and have no further comments to make here.

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